

IN THE SPECIFICATION

Please delete the 1st full paragraph on page 3, lines 10-26 of the originally filed specification and replace it with the paragraph set forth immediately below in clean form. Additionally, in accordance with § 37 CFR 1.121(b)(iii), the 1st full paragraph on page 3, lines 10-26 of the originally filed specification amended herein is set forth in a marked up version on the sheets attached to this amendment.

Q' This plan and methodology provided relative stability for an extended period of time. The calls were 1-2 minute calls whose time of occurrence was subject to estimation. However in the last several years there has been exponential growth in use of the Internet, where the hold time may be measured in hours. In addition, modern public communication networks increasingly need to provide customers with a range of communication services, from baseband voice service, to computer data communications, to high speed digital data communications for multimedia and the like. Yet many such services are seriously impeded or virtually blocked by existing telephone network line cards. These provide coding and decoding (CODEC) functions between analog and digital signals, and process digital signals only at the relatively low, fixed bit rate.

IN THE CLAIMS

Please amend Claims 1, 10-11, 13-15, 18-19, 25-27, 36-37, 40-41, 43, and 45-48. as set forth immediately below in clean form. Additionally, in accordance with § 37 CFR 1.121(b)(iii), Claims 1, 10-11, 13-15, 18-19, 25-27, 36-37, 40-41, 43, and 45-48 amended herein is set forth in a marked up version on the sheets attached to this amendment.

Q² 1. (Once Amended) A method comprising:

a. requesting from a customer premises terminal a local link to a line unit and telephone network switch in a switched telephone network a communication path to a destination;

Q² b. detecting, via a monitor, that the requesting step does not seek conversion in said line unit;

c. connecting said terminal through a portion of said line unit around a converter in said line unit to a wide band data switch connected to a data network.

Q³ 10. (Once Amended) A method according to claim 7, wherein said digital signal processor is indirectly associated with said line unit.

11. (Once Amended) A method according to claim 7, wherein said digital signal processor is directly associated with said wide band data switch.

13. (Once Amended) A method according to claim 1, wherein said requesting step is made by emitting from said terminal a signal of a predetermined characteristic and wherein said detecting is accomplished by a detecting device associated with said line unit.

Q⁴ 14. (Once Amended) A method according to claim 1, further including the steps of: signaling a central processing unit (CPU) controlling said telephone network switch to effect an entry in a journal of said telephone network switch, and using said entry for billing for the communications path set up in response to said requesting step.

15. (Once Amended) A method according to claim 1, wherein said connecting step through a portion of said line unit around a converter therein to a wide band switch is a virtual hard wired connection.

18. (Once Amended) A method comprising:

Q⁵ a. requesting from a customer premises terminal via a local link to a line unit and telephone network switch in a switched telephone network a communication path to a destination;

b. detecting, via a monitor, that the request seeks bandwidth in excess of that available through said line unit;

Q5 c. connecting said terminal through a portion of said line unit around a converter in said line unit to a wide band data switch connected to a data network.

19. (Once Amended) A method according to claim 18, wherein said portion of said line unit comprises a concentrator network of said line unit.

25. (Once Amended) A method according to claim 24, wherein said digital signal processor is indirectly associated with said line unit.

26. (Once Amended) A method according to claim 23, wherein said digital signal processor is directly associated with said wide band data switch.

Q6 27. (Once Amended) A method comprising:

a. receiving a signal via a local link from customer premises in a telecommunications network connected by said local link to a program controlled switch in said telecommunications network;

b. making a determination, via a monitor, regarding a pre-established characteristic of said signal;

c. responsive to said determination, solid state switching said signal to digital signal processing and a wide band network edge device.

Q7 36. (Once Amended) A method according to claim 34, wherein said digital signal processing is performed in an adaptive digital signal processor with a programmed controller providing coding and decoding functions adapted to a particular communication service requested by said signal and the physical level of signal protocol used over said local link from said customer premises.

37. (Once Amended) A communications network comprising:

a switched telecommunications network comprising trunked together program controlled switches connected to subscriber premises by local links;

line units connecting said local links to said switches, said line units including cross-point switches and converters performing digital coding and decoding (CODECs);

Q7 said line units having monitors detecting signals from said customer premises having a pre-established characteristic;

said line units having ports connected to said cross-point switches, said ports having connections to a wide band data switch connected to a data network, wherein when a monitor in one line unit detects signals from one subscriber premises having said pre-established characteristics, the cross-point switches, in the one line unit, switches signals through from the link to the one subscriber premises to one of said ports to said wide band data switch.

40. (Once Amended) A communications network according to claim 39, wherein the signals switched through said cross-point switches to said ports to said wide band data switch are hard-wired connected to said wide band data switch.

Q8 41. (Once Amended) A line unit for a switched telecommunications network comprising trunked together program controlled switches connected to subscriber premises by local links connected to the line unit, said line unit comprising;

a line concentrator network for connection to a plurality of local links, said concentrator network including switches, and a high bandwidth port;

customer interface hardware;

a converter for converting signals on the plurality of local links to digital signals at a predetermined narrowband bit-rate; and

Q⁸ a monitor, for detecting a pre-designated signal on one of the plurality of local links and providing an output signal to said concentrator network to cause said concentrator network to provide a connection to said port for signals on the one link.

Q⁹ 43. (Once Amended) A line unit according to claim 42, wherein the concentrator switches create a hard wired connection to said port for the one link.

45. (Once Amended) A line unit according to claim 41, including a digital signal processor with a programmed controller providing coding and decoding functions adapted to a service requested by the detected signal and the physical level protocol used over the one local link.

Q¹⁰ 46. (Once Amended) A line unit for selective connection of a local link to a digital switch of a telephone network and a broadband data network, the line unit comprising:

a switch for connection to the local link, the switch comprising a first port for a narrowband communication and a second port for connection to the broadband data network; and

a monitor means for detecting a request for a broadband service and in response controlling the switch to connect the local link to the second port.

47. (Once Amended) A line unit as in claim 46, further comprising a channel circuit, coupled to the first port, for channeling signals for communication via the local link and a predetermined digital rate channel corresponding to the narrowband communication.

48. (Once Amended) A line unit for selective connection of a local link to a digital switch of a telephone network and a broadband data network, the line unit comprising:

a switch for connection to the local link, the switch comprising a first port for a narrowband communication and a second port for connection to the broadband data network;

Q¹⁰ a channel circuit, coupled to the first port, for channeling signals for communication via the local link and a predetermined digital rate channel corresponding to the narrowband communication; and

a monitor for coupling to the local link to detect a broadband service request, and in response, control the switch to connect the local link to the second port.

Please add new Claims 49-61 as set forth below.

49. (New) A method according to claim 1, wherein the monitor includes scan point matrix switches, a signal processor, and a controller, wherein the controller is located in the line unit.

Q¹¹ 50. (New) A method according to claim 18, wherein the monitor includes scan point matrix switches, a signal processor, and a controller, wherein the controller is located in the line unit.

51. (New) A method according to claim 27, wherein the monitor includes scan point matrix switches, a signal processor, and a controller, wherein the controller is located in the line unit.

52. (New) A line unit as in claim 46, wherein the monitor means includes scan point matrix switches, a signal processor, and a controller, wherein the controller is located in the line unit.

53. (New) A method comprising:

requesting from a customer premises terminal a local link to a line unit and telephone network switch in a switched telephone network a communication path to a destination;

detecting, via a monitor, that the requesting step does not seek conversion in said line unit;

connecting said terminal through a portion of said line unit around a converter in said line unit to a wide band data switch connected to a data network; and

signaling a central processing unit (CPU) controlling said telephone network switch to effect an entry in a journal of said telephone network switch, and using said entry for billing for the communications path set up in response to said requesting step.

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54. (New) A method comprising:

requesting from a customer premises terminal a local link to a line unit and telephone network switch in a switched telephone network a communication path to a destination;

detecting, via a monitor, that the requesting step does not seek conversion in said line unit; and

connecting said terminal through a portion of said line unit around a converter in said line unit to a wide band data switch connected to a data network, wherein said connecting step through a portion of said line unit around a converter therein to a wide band switch is a virtual hard wired connection.

55. (New) A method according to claim 54, wherein said connection to said wide band network is through an Asynchronous Transfer Mode (ATM) edge device.

56. (New) A method comprising:

receiving a signal via a local link from customer premises in a telecommunications network connected by said local link to a program-controlled switch in said telecommunications network;

making a determination, via a monitor, regarding a pre-established characteristic of said signal; and

responsive to said determination, solid state switching said signal to digital signal processing and a wide band network edge device, wherein said solid state switching comprises cross-point switching, wherein said cross point switching is performed in a line unit in said telecommunications network, wherein said cross-point switching directs said signal away from a two-way digital/analog converter in said line unit having predetermined narrowband digital bit-rate capabilities.

57. (New) A method according to claim 56, wherein said wide band network edge device is an Asynchronous Transfer Mode (ATM) edge device.

58. (New) A method according to claim 57, wherein said digital signal processing occurs in said edge device.

59. (New) A method comprising:

receiving a signal via a local link from customer premises in a telecommunications network connected by said local link to a program controlled switch in said telecommunications network;

making a determination, via a monitor, regarding a pre-established characteristic of said signal; and

responsive to said determination, solid state switching said signal to digital signal processing and a wide band network edge device, wherein said digital signal processing is performed in a processor separate from said wide band edge device, wherein the processor performing said digital signal processing is associated with a line unit through a portion of which said signal is conducted.

60. (New) A method according to claim 59, wherein said processor performing said digital signal processing comprises a part of said line unit.